

DECLARATION UNDER 37 C.F.R. §1.132

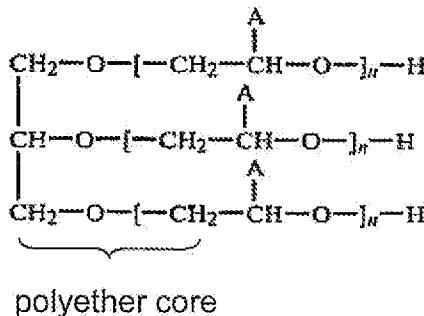
Docket No. P020-7009US0

Applicant: Michael T. MILBOCKER
Serial No: 10/020,331
Filed: December 12, 2001
For: IN SITU BONDS
Examiner: Fubara, Blessing M.
Art Unit: 1618
Conf. No.: 9980

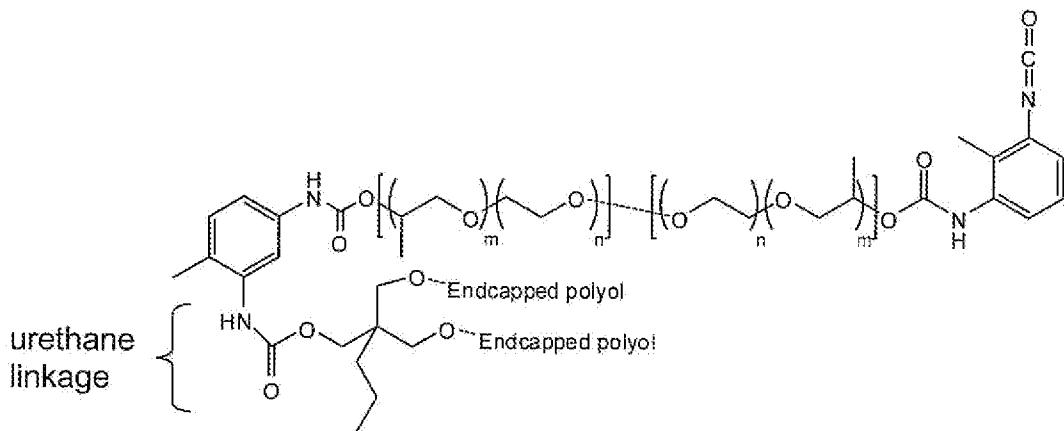
DECLARATION UNDER 37 C.F.R. §1.132

The undersigned hereby declares and states:

1. I, Michael T. Milbocker, am the Chief Scientific Officer Promethean Surgical Devices, LLC, the owner of record for the above-referenced application.
2. I have worked as a polymer chemist for over 24 years and have a B.S., M.S., and Ph.D.
3. I am also the inventor of the above-referenced patent application.
4. I have read and understood the above-referenced patent application, the Office Action dated June 8, 2010, and the prior art reference cited in the Office Action, namely U.S. Patent No. 4,241,537 ("Wood").
5. Based on my understanding of Wood, Wood teaches the use and formation of polymers having branched structures stemming from a trifunctional core.
6. Wood at col. 6, lines 15-62, teaches the formation of a trimethylolpropane core that is bonded to a polyol branch by ether linkages, as shown below:



7. In contrast to Wood, the presently claimed invention recites a product-by-process reaction that necessarily results in a trimethylolpropane core bonded to the polyol chains via urethane linkages.



This structure of the core, resulting from the claimed product-by-process limitation represents a clear from Wood, in which ether linkages are used to bind the trimethylolpropane core to the polyol chain.

8. The present claims recite "said block copolymer polyol ... is formed from a reaction between a polyethylene/polypropylene oxide diol of between 800 and 5,000 MW, trimethylolpropane, and the low molecular weight polyisocyanate."

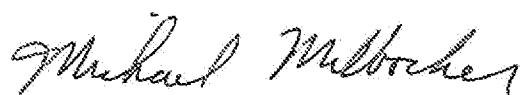
9. One does not need a two step-process to arrive at the trimethylolpropane-urethane core. The claimed product can be formed from either a one-pot reaction or through a multiple-step reaction.

10. If all three claimed reactants, i.e., the diol, the trimethylolpropane, and the low molecular weight polyisocyanate, are present in a single vessel, reactions will initially occur between the diisocyanate and the OH groups of the diol to form NCO-endcapped diols. This product is formed due to the higher reactivity of the diol OH groups over those of trimethylolpropane. Subsequently, the OH groups of trimethylolpropane react with the NCO-endcapped diols. Therefore, if enough NCO groups are provided to balance equal to or greater the number of total OH groups, and given the higher reactivity of the diol OH groups, the reaction naturally occurs in this sequence. The resulting product has urethane linkages at the core.

11. In contrast, Wood describes first reacting the trimethylolpropane with the diol to form a polyether triol, the product shown at col. 5, lines 45-60 or at Example 1 (col. 10, l. 1.) This polyether triol is formed because an isocyanate group is not present in the reaction mixture. Nowhere does Wood describe an initial reaction between the diisocyanate and the polyether triol, nor does Wood describe the claimed reaction.

12. Wood contemplates copolymerizing ethylene oxide (EO) and/or polyethylene (PO) in the presence of polyols such as trimethylopropane. Once the EO and/or PO is copolymerized with polyols, the core necessarily forms a polyether core. Wood then adds isocyanates after forming the polyether core, resulting in a product having polyurethanes at the terminus of each branch emanating from the core. The addition of isocyanates after forming the polyether core will not result in polyurethanes at the core.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.



Date: 11-8-10

Dr. Michael T. Milbocker